REMARKS

This is in full and timely response the non-final Office Action mailed on November 25, 2002. Reexamination in light of the amendments and the following remarks is respectfully requested.

Claims 1-104 are pending in this application, with claims 1, 13, 23, 33, 45, 55, 65, 72, 78, 84, 87, 90 and 93-104 being independent.

No new matter is added.

Allowable subject matter

Appreciation is expressed for the indication that claims 2, 3, 4, 12, and 68-70 contain allowable subject matter.

Interview

Applicant gratefully wishes to thank the Examiner for the telephone call of November 29, 2002 to discuss the rejection of the claims.

Restriction

The Office Action request the cancellation of claims 13-64, 72-83 and 87-92.

In response to this request, a Petition Under 37 C.F.R. §1.144 has been filed along with this Amendment. Please have this Petition considered in a timely manner. Additionally, please hold this request for the cancellation of claims 13-64, 72-83 and 87-92 in abeyance until all restriction issues have been overcome.

In addition, the Office Action includes yet another restriction requirement. However, this latest restriction requirement lacks clarity in light of the restriction requirement of August 26, 2002 and the Response to Restriction Requirement filed on September 16, 2002.

Title

The Office Action objects to the title as being non-descriptive and suggests a new title. In response, please hold this objection in abeyance until all restriction issues have been overcome.

Specification

The Office Action provides a layout for the specification. However, note that while the form of layout set forth within in the Office Action is a suggested layout, the form of layout set forth within in the Office Action is not necessarily a requirement of 35 U.S.C. §111 or by 37 C.F.R. §1.77. It is submitted that the specification as originally filed is compliant

with 35 U.S.C. §111 and 37 C.F.R. §1.77.

Abstract

The Office Action objects to the Abstract of the specification. In response, the Abstract has been amended as requested.

Rejections under 35 U.S.C. §112

Claims were rejected allegedly for various reasons under 35 U.S.C. §112, second paragraph.

This rejection is traversed at least for the following reasons.

The Office Action contends that the term "living body" found within claims 2, 4, 12, 68 and 70 lacks clarity. In response, claims 2, 4, 12, 68 and 70 refer to a plurality of objects designed by an object-oriented design corresponding to the behavior of a living body.

In this regard, the specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication. *Bell Atlantic Network Services Inc. v. Covad Communications Group Inc.*, 59 USPQ2d 1865, 1870 (Fed. Cir. 2001). Passages throughout the specification provide that this

robot device behaves naturally, like a living body having reality and a sense of living.

Withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. §102

Claims 1, 15-11 [sic], 65-67, 71, and 84-86 under 35 U.S.C. §102 as allegedly being anticipated by Breaseal et al., "*Infant-like Social Interactions between a Robot and a Human Caregiver*", Massachusetts Institute of Technology Artificial Intelligence Lab, pp. 1-57, 1998 (Breaseal).

This rejection is traversed at least for the following reasons.

As in initial matter, the Office Action indicates that claims 1, **15-11**, 65-67, 71, and 84-86 were rejected. But because the body of the rejection also refers to claims 5-11, it is believe that a rejection of claims 1, **5-11**, 65-67, 71, and 84-86 was intended.

The above-identified application has a priority date of November 30, **1998**, while Breaseal has a publication date of "**1998**". Thus, the Office Action fails to clearly establish the Breaseal reference as prior art against the above-identified

application. Withdrawal of this rejection is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753 or the undersigned attorney at the below-listed number. If any fee is required, the Commissioner is hereby authorized to charge the fee to Deposit Account # 18-0013.

Respectfully submitted,

DATE: March 25, 2003

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APPENDIX

IN THE ABSTRACT

Please replace the abstract with the following abstract. A clean copy of the abstract is attached on a separate sheet.

-- When information is inputted from the recognition object, the emotion module discriminates the type of the inputted information (step ST1) and changes the emotion level of each emotion unit using the parameter corresponding to the inputted information (step ST2)~~, as shown in Fig.4~~. The emotion module selects the emotion unit having the maximum emotion level from among the emotion units having the emotion levels exceeding the threshold value. The selected emotion unit notifies the object ~~which~~ that is requesting the output, for example, the behavior-production object, of that information. --

IN THE CLAIMS

Please amend the claims as follows.

1. A robot device comprising:

an emotion module in which a plurality of emotion units representing various emotions affect one another to output an emotion; and

action means for acting on the basis of the emotion outputted by the emotion module.

2. The robot device as claimed in claim 1, further comprising a plurality of objects each being designed by an object-oriented design corresponding to the behavior of a living body,

wherein the emotion module outputs an emotion as the plurality of emotion units affect one another on the basis of information from the plurality of objects, and

the plurality of objects affect one another and affect the emotion from the emotion module so as to output the information.

3. The robot device as claimed in claim 1, wherein the emotion units are designed by an object-oriented design.

4. The robot device as claimed in claim 2, wherein the action means includes a plurality of objects each being designed by an object-oriented design corresponding to the means for the behavior of the living body.

5. The robot device as claimed in claim 1, wherein the emotion module outputs information of an emotion unit having the highest emotion level as the emotion of the plurality of emotion units having affected one another.

6. The robot device as claimed in claim 5, wherein the respective emotion units of the emotion module affect one another on the basis of external information.

7. The robot device as claimed in claim 5, wherein the respective emotion units of the emotion module affect one another with the lapse of time.

8. The robot device as claimed in claim 1, further comprising storage means for storing a plurality of parameters for controlling the state of emotion of each emotion unit,

wherein the emotion module controls the state of emotion of each emotion unit on the basis of each parameter stored in the storage means.

9. The robot device as claimed in claim 1, further comprising transmission/reception means for transmitting an emotion outputted by the emotion module and/or receiving an emotion from outside and for notifying the action means of the emotion.

10. The robot device as claimed in claim 9, wherein the robot device behaves in accordance with the emotion of another robot device received by the transmission/reception means.

11. The robot device as claimed in claim 10, wherein the emotion module changes the state of emotion of the emotion unit in accordance with the emotion of another robot device.

12. The robot device as claimed in claim 2, further comprising an instinct module for outputting an instinct as a plurality of instinct units representing various instincts that change their respective instinct levels,

wherein the emotion module and the instinct module operate independently while affecting the plurality of objects, and

the action means acts on the basis of the output from the emotion module and the instinct module.

13. A control method for a robot device comprising:

an emotion-output step of outputting an emotion as a plurality of emotion units representing various emotions affect one another; and

an action-control step of controlling the action of the robot device on the basis of the emotion outputted at the emotion-output step.

14. The control method for a robot device as claimed in claim 13, wherein at the emotion-output step, the plurality of emotion units affect one another to output an emotion on the

basis of information from a plurality of objects each being designed by an object-oriented design corresponding to the behavior of a living body, and

the plurality of objects affect one another and affect the emotion from the emotion-output step so as to output the information.

15. The control method for a robot device as claimed in claim 13, wherein the emotion units are designed by an object-oriented design.

16. The control method for a robot device as claimed in claim 13, wherein at the emotion-output step, information of an emotion unit having the highest emotion level is outputted as the emotion of the plurality of emotion units having affected one another.

17. The control method for a robot device as claimed in claim 16, wherein at the emotion-output step, the respective emotion units of the emotion module affect one another on the basis of external information.

18. The control method for a robot device as claimed in claim 16, wherein at the emotion-output step, the respective emotion units of the emotion module affect one another with the

lapse of time.

19. The control method for a robot device as claimed in claim 13, wherein at the emotion-output step, the state of emotion of each emotion unit is controlled on the basis of a parameter for controlling the state of emotion of each emotion unit.

20. The control method for a robot device as claimed in claim 13, wherein the emotion of another robot device outputted by said another robot device is received and a behavior corresponding to the emotion of said another robot device is taken.

21. The control method for a robot device as claimed in claim 20, wherein at the emotion-output step, the state of emotion of the emotion unit is changed in response to the emotion of said another robot device.

22. The control method for a robot device as claimed in claim 14, further comprising an instinct output step of outputting an instinct as a plurality of instinct units representing various instincts that change their respective instinct levels,

wherein at the emotion-output step and the instinct output

step, the emotion and the instinct are affected by the plurality of objects and are independently outputted, and

at the action-control step, the action of the robot device is controlled on the basis of the emotion and the instinct outputted at the emotion-output step and the instinct output step.

23. A program recording medium having recorded therein a program for carrying out:

an emotion-output step of outputting an emotion as a plurality of emotion units representing various emotions that affect one another; and

an action-control step of controlling the action of the robot device on the basis of the emotion outputted at the emotion-output step.

24. The program recording medium as claimed in claim 23, wherein at the emotion-output step, the plurality of emotion units affect one another to output an emotion on the basis of information from a plurality of objects each being designed by an object-oriented design corresponding to the behavior of a living body, and

the plurality of objects affect one another and affect the emotion from the emotion-output step so as to output the information.

25. The program recording medium as claimed in claim 23, wherein the emotion units are designed by an object-oriented design.

26. The program recording medium as claimed in claim 23, wherein at the emotion-output step, information of an emotion unit having the highest emotion level is outputted as the emotion of the plurality of emotion units having affected one another.

27. The program recording medium as claimed in claim 26, wherein at the emotion-output step, the respective emotion units of the emotion module affect one another on the basis of external information.

28. The program recording medium as claimed in claim 26, wherein at the emotion-output step, the respective emotion units of the emotion module affect one another with the lapse of time.

29. The program recording medium as claimed in claim 23, wherein at the emotion-output step, the state of emotion of each emotion unit is controlled on the basis of a parameter for controlling the state of emotion of each emotion unit.

30. The program recording medium as claimed in claim 23,

wherein the emotion of another robot device outputted by said another robot device is received and a behavior corresponding to the emotion of said another robot device is taken.

31. The program recording medium as claimed in claim 30, wherein at the emotion-output step, the state of emotion of the emotion unit is changed in response to the emotion of said another robot device.

32. The program recording medium as claimed in claim 24, further comprising an instinct output step of outputting an instinct as a plurality of instinct units representing various instincts that change their respective instinct levels,

wherein at the emotion-output step and the instinct output step, the emotion and the instinct are affected by the plurality of objects and are independently outputted, and

at the action-control step, the action of the robot device is controlled on the basis of the emotion and the instinct outputted at the emotion-output step and the instinct output step.

33. A robot device comprising:

an instinct module in which a plurality of instinct units representing various instincts output individual instincts; and

action means for acting on the basis of the instinct

outputted by the instinct module.

34. The robot device as claimed in claim 33, further comprising a plurality of objects each being designed by an object-oriented design corresponding to the behavior of a living body,

wherein the plurality of instinct units of the instinct module output an instinct on the basis of information from the plurality of objects, and

the plurality of objects affects one another and affects the instinct from the instinct module so as to output the information.

35. The robot device as claimed in claim 33, wherein the instinct units are designed by an object-oriented design.

36. The robot device as claimed in claim 34, wherein the action means includes a plurality of objects each being designed by an object-oriented design corresponding to means for the behavior of the living body.

37. The robot device as claimed in claim 33, wherein the instinct module outputs information of an instinct unit having the highest instinct level as the instinct.

38. The robot device as claimed in claim 37, wherein the instinct module outputs the instinct on the basis of external information.

39. The robot device as claimed in claim 37, wherein the respective instinct units of the instinct module output the instinct with the lapse of time.

40. The robot device as claimed in claim 33, further comprising storage means for storing a plurality of parameters for controlling the state of instinct of each instinct unit,

wherein the instinct module controls the state of instinct of each instinct unit on the basis of each parameter stored in the storage means.

41. The robot device as claimed in claim 33, further comprising transmission/reception means for transmitting an instinct outputted by the instinct module and/or receiving an instinct from outside and for notifying the action means of the instinct.

42. The robot device as claimed in claim 41, wherein the robot device behaves in accordance with the instinct of another robot device received by the transmission/reception means.

43. The robot device as claimed in claim 42, wherein the instinct module changes the state of instinct of the instinct unit in accordance with the instinct of another robot device.

44. The robot device as claimed in claim 34, further comprising an emotion module for outputting an emotion as a plurality of emotion units representing various emotions that change their respective emotion levels,

wherein the instinct module and the emotion module operate independently while affecting the plurality of objects, and

the action means acts on the basis of the output from the instinct module and the emotion module.

45. A control method for a robot device comprising:

an instinct output step of outputting an instinct as a plurality of instinct units representing various instincts that affect one another; and

an action-control step of controlling the action of the robot device on the basis of the instinct outputted at the instinct output step.

46. The control method for a robot device as claimed in claim 45, wherein at the instinct output step, the plurality of instinct units output an instinct on the basis of information from a plurality of objects each being designed by an object-

oriented design corresponding to the behavior of a living body, and

the plurality of objects affects one another and affects the instinct from the instinct output step so as to output the information.

47. The control method for a robot device as claimed in claim 45, wherein the instinct units are designed by an object-oriented design.

48. The control method for a robot device as claimed in claim 45, wherein at the instinct output step, information of an instinct unit having the highest instinct level is outputted as the instinct.

49. The control method for a robot device as claimed in claim 48, wherein at the instinct output step, an instinct is outputted on the basis of external information.

50. The control method for a robot device as claimed in claim 48, wherein at the instinct output step, the respective instinct units output an instinct with the lapse of time.

51. The control method for a robot device as claimed in claim 45, wherein at the instinct output step, the state of

instinct of each instinct unit is controlled on the basis of a parameter for controlling the state of instinct of each instinct unit.

52. The control method for a robot device as claimed in claim 45, wherein the instinct of another robot device outputted by said another robot device is received and a behavior corresponding to the instinct of said another robot device is taken.

53. The control method for a robot device as claimed in claim 52, wherein at the instinct output step, the state of instinct of the instinct unit is changed in response to the instinct of said another robot device.

54. The control method for a robot device as claimed in claim 46, further comprising an emotion-output step of outputting an emotion as a plurality of emotion units representing various emotions that change their respective emotion levels,

wherein at the instinct output step and the emotion-output step, the instinct and the emotion are affected by the plurality of objects and are independently outputted, and

at the action-control step, the action of the robot device is controlled on the basis of the instinct and the emotion outputted at the instinct output step and the emotion-output

step.

55. A program recording medium having recorded therein a program for carrying out:

an instinct output step of outputting an instinct as a plurality of instinct units representing various instincts that affect one another; and

an action-control step of controlling the action of the robot device on the basis of the instinct outputted at the instinct output step.

56. The program recording medium as claimed in claim 55, wherein at the instinct output step, the plurality of instinct units output an instinct on the basis of information from a plurality of objects each being designed by an object-oriented design corresponding to the behavior of a living body, and

the plurality of objects affects one another and affects the instinct from the instinct output step so as to output the information.

57. The program recording medium as claimed in claim 55, wherein the instinct units are designed by an object-oriented design.

58. The program recording medium as claimed in claim 55,

wherein at the instinct output step, information of an instinct unit having the highest instinct level is outputted as the instinct.

59. The program recording medium as claimed in claim 58, wherein at the instinct output step, an instinct is outputted on the basis of external information.

60. The program recording medium as claimed in claim 58, wherein at the instinct output step, the respective instinct units output an instinct with the lapse of time.

61. The program recording medium as claimed in claim 55, wherein at the instinct output step, the state of instinct of each instinct unit is controlled on the basis of a parameter for controlling the state of instinct of each instinct unit.

62. The program recording medium as claimed in claim 55, wherein the instinct of another robot device outputted by said another robot device is received and a behavior corresponding to the instinct of said another robot device is taken.

63. The program recording medium as claimed in claim 62, wherein at the instinct output step, the state of instinct of the instinct unit is changed in response to the instinct of said

another robot device.

64. The program recording medium as claimed in claim 56, further comprising an emotion-output step of outputting an emotion as a plurality of emotion units representing various emotions change their respective emotion levels,

wherein at the instinct output step and the emotion-output step, the instinct and the emotion are affected by the plurality of objects and are independently outputted, and

at the action-control step, the action of the robot device is controlled on the basis of the instinct and the emotion outputted at the instinct output step and the emotion-output step.

65. A robot device comprising:

an emotion module in which a plurality of emotion units representing emotions output individual emotions;

an instinct module in which a plurality of instinct units representing instincts outputs individual instincts; and

action means for acting on the basis of the emotion outputted by the emotion module and the instinct outputted by the instinct module.

66. The robot device as claimed in claim 65, wherein the emotion units are affected by an instinct outputted by the

instinct module, and

the instinct units are affected by an emotion outputted by the emotion module.

67. The robot device as claimed in claim 65, wherein the plurality of emotion units affects one another to output an emotion.

68. The robot device as claimed in claim 65, further comprising a plurality of objects designed by an object-oriented design corresponding to the behavior of a living body,

wherein the emotion module outputs an emotion on the basis of information from the plurality of objects,

the instinct module outputs an instinct on the basis of information from the plurality of objects,

the plurality of objects affects one another and affects the emotion from the emotion module and the instinct from the instinct module so as to output the information.

69. The robot device as claimed in claim 65, wherein the emotion units and the instinct units are designated by an object-oriented design.

70. The robot device as claimed in claim 66, wherein the action means includes a plurality of objects each being

designated by an object-oriented design corresponding to means for the behavior of a living body.

71. The robot device as claimed in claim 65, wherein the emotion module outputs information of an emotion unit having a high emotion level as the emotion, and

the instinct module outputs information of an instinct unit having a high instinct level as the instinct.

72. A control method for a robot device comprising:

an emotion-output step of outputting individual emotions by a plurality of emotion units representing emotions;

an instinct output step of outputting individual instincts by a plurality of instinct units representing instincts; and

an action-control step of controlling the action of the robot device on the basis of the emotion outputted at the emotion-output step and the instinct outputted at the instinct output step.

73. The control method for a robot device as claimed in claim 72, wherein the emotion units are affected by an instinct outputted at the instinct output step, and

the instinct units are affected by an emotion outputted at the emotion-output step.

74. The control method for a robot device as claimed in claim 72, wherein the plurality of emotion units affects one another to output an emotion.

75. The control method for a robot device as claimed in claim 72, wherein at the emotion-output step, an emotion is outputted on the basis of information from a plurality of objects each being designated by an object-oriented design corresponding to the behavior of a living body,

at the instinct output step, an instinct is outputted on the basis of information from a plurality of objects each being designated by an object-oriented design corresponding to the behavior of a living body, and

the plurality of objects affects one another and affects the emotion from the emotion module and the instinct from the instinct module so as to output the information.

76. The control method for a robot device as claimed in claim 72, wherein the emotion units and the instinct units are designated by an object-oriented design.

77. The control method for a robot device as claimed in claim 72, wherein at the emotion-output step, information of an emotion unit having a high emotion level is outputted as the emotion, and

at the instinct output step, information of an instinct unit having a high instinct level is outputted as the instinct.

78. A program recording medium having recorded therein a program for carrying out:

an emotion-output step of outputting individual emotions by a plurality of emotion units representing emotions;

an instinct output step of outputting individual instincts by a plurality of instinct units representing instincts; and

an action-control step of controlling the action of the robot device on the basis of the emotion outputted at the emotion-output step and the instinct outputted at the instinct output step.

79. The program recording medium as claimed in claim 78, wherein the emotion units are affected by an instinct outputted at the instinct output step, and

the instinct units are affected by an emotion outputted at the emotion-output step.

80. The program recording medium as claimed in claim 78, wherein the plurality of emotion units affects one another to output an emotion.

81. The program recording medium as claimed in claim 79,

wherein at the emotion-output step, an emotion is outputted on the basis of information from a plurality of objects each being designated by an object-oriented design corresponding to the behavior of a living body, and

at the instinct output step, an instinct is outputted on the basis of information from a plurality of objects each being designated by an object-oriented design corresponding to the behavior of a living body,

the plurality of objects affecting one another and affecting the emotion from the emotion module and the instinct from the instinct module so as to output the information.

82. The program recording medium as claimed in claim 78, wherein the emotion units and the instinct units are designated by an object-oriented design.

83. The program recording medium as claimed in claim 78, wherein at the emotion-output step, information of an emotion unit having a high emotion level is outputted as the emotion, and

at the instinct output step, information of an instinct unit having a high instinct level is outputted as the instinct.

84. A robot device comprising:

detection means for detecting a stimulus applied from outside;

storage means for storing the record of information related to the stimulus;

response processing decision means for deciding response processing on the basis of the stimulus detected by the detection means; and

response execution means for executing the response processing decided by the response processing decision means;

wherein the response processing decision means decides the response processing on the basis of the record information stored in the storage means.

85. The robot device as claimed in claim 84, wherein the response processing decision means is an emotion module for deciding an emotion in response to an emotion level, which is the record information, changing in response to the stimulus due to an emotion, and

the response execution means takes a behavior and/or an action for expressing the emotion decided by the emotion module.

86. The robot device as claimed in claim 84, wherein the response processing decision means is an instinct module for deciding an instinct in response to an instinct level, which is the record information, changing in response to the stimulus due to an instinct, and

the response execution means takes a behavior and/or an

action for expressing the instinct decided by the instinct module.

87. A control method for robot device comprising:

a detection step of detecting a stimulus applied to the robot device from outside;

a response processing decision step of deciding response processing of the robot device on the basis of the stimulus detected at the detection step; and

a response execution step of causing the robot device to execute the response processing decided at the response processing decision step; and

wherein at the response processing decision step, the response processing is decided on the basis of the record information stored in storage means.

88. The control method for a robot device as claimed in claim 87, wherein the response processing decision means is an emotion module for deciding an emotion in response to an emotion level, which is the record information, changing in response to the stimulus due to an emotion, and

the response execution means causes the robot device to take a behavior and/or an action for expressing the emotion decided by the emotion module.

89. The control method for a robot device as claimed in claim 87, wherein the response processing decision means is an instinct module for deciding an instinct in response to an instinct level, which is the record information, changing in response to the stimulus due to an instinct, and

the response execution means causes the robot device to take a behavior and/or an action for expressing the instinct decided by the instinct module.

90. A program recording medium having recorded therein a program for carrying out:

a detection step of detecting a stimulus applied to a robot device from outside;

a response processing decision step of deciding the response processing of the robot device on the basis of the stimulus detected at the detection step; and

a response execution step of causing the robot device to execute the response processing decided at the response processing decision step;

wherein at the response processing decision step, the response processing is decided on the basis of the record information stored in storage means.

91. The program recording medium as claimed in claim 90, wherein the response processing decision means is an emotion

module for deciding an emotion in response to an emotion level, which is the record information, changing in response to the stimulus due to an emotion, and

the response execution means causes the robot device to take a behavior and/or an action for expressing the emotion decided by the emotion module.

92. The program recording medium as claimed in claim 90, wherein the response processing decision means is an instinct module for deciding an instinct in response to an instinct level, which is the record information, changing in response to the stimulus due to an instinct, and

the response execution means causes the robot device to take a behavior and/or an action for expressing the instinct decided by the instinct module.

Please add the following claims.

93. (new) A robot device having a multi-joint driving unit, comprising:

means for holding a recognition object constructed by an object-oriented design, the recognition object being adapted for recognizing input information and notifying of a result of recognition;

means for holding an emotion model object constructed by an object-oriented design, the emotion model object having the result of recognition of the recognition object inputted thereto and being adapted for changing an emotion level in accordance with the input information; and

means for holding an action generation object constructed by an object-oriented design, the action generation object being adapted for causing the robot device to act by controlling the multi-joint driving unit on the basis of information from the emotion model object.

94. (new) A robot device having a multi-joint driving unit, comprising:

means for holding a recognition object constructed by an object-oriented design, the recognition object being adapted for recognizing an internal state and notifying of a result of recognition;

means for holding an instinct model object constructed by an object-oriented design, the instinct model object having the result of recognition of the recognition objectinputted thereto and being adapted for changing an instinct level in accordance with the input information; and

means for holding an action generation object constructed by an object-oriented design, the action generation object being adapted for causing the robot device to act by controlling the

multi-joint driving unit on the basis of information from the instinct model object.

95. (new) An action control method for a robot device having a multi-joint driving unit, the method comprising:

a step of notifying an emotion model object constructed by an object-oriented design, of a result of recognition from a recognition object constructed by an object oriented design and adapted for recognizing input information;

a step of changing an emotion level in accordance with the information of the result of recognition of the recognition object inputted to the emotion model object; and

a step of causing the robot device to act by controlling the multi-joint driving unit by an action generation object constructed by an object-oriented design on the basis of information from the emotion model object.

96. (new) An action control method for a robot device having a multi-joint driving unit, the method comprising:

a step of notifying an instinct model object constructed by an object-oriented design, of a result of recognition from a recognition object constructed by an object oriented design and adapted for recognizing an internal state;

a step of changing an instinct level in accordance with the information of the result of recognition of the recognition

object inputted to the instinct model object; and

a step of causing the robot device to act by controlling the multi-joint driving unit by an action generation object constructed by an object-oriented design on the basis of information from the instinct model object.

97. (new) A recording medium in which a program for controlling an action of a robot device having a multi-joint driving unit is recorded, the program being adapted, for executing:

a step of notifying an emotion model object constructed by an object-oriented design, of a result of recognition from a recognition object constructed by an object oriented design and adapted for recognizing input information;

a step of changing an emotion level in accordance with the information of the result of recognition of the recognition object inputted to the emotion model object; and

a step of causing the robot device to act by controlling the multi-joint driving unit by an action generation object constructed by an object-oriented design on the basis of information from the emotion model object.

98. (new) A recording medium in which a program for controlling an action of a robot device having a multi-joint driving unit is recorded, the program being adapted for

executing:

a step of notifying an instinct model object constructed by an object-oriented design, of a result of recognition from a recognition object constructed by an object oriented design and adapted for recognizing an internal state;

a step of changing an instinct level in accordance with the information of the result of recognition of the recognition object inputted to the instinct model object; and

a step of causing the robot device to act by controlling the multi-joint driving unit by an- action generation object constructed by an object-oriented design on the basis of information from the instinct model object.

99. (new) A robot device having a multi-joint driving unit, comprising:

external state detection means for detecting an external state;

an emotion module having a value changing on the basis of the detected external state; action generation control means for controlling the multi-joint driving unit on the basis of the value of the emotion module; and

communication means for receiving a value of an emotion module of another robot device;

wherein the value of the emotion module of the robot device changes on the basis of the value of the emotion module of said

another robot device received by the communication means.

100. (new) A robot device having a multi-joint driving unit, comprising:

external state detection means for detecting an external state;

an emotion module having a value changing on the basis of the detected external state;

action generation control means for controlling the multi-joint driving unit on the basis of the value of the emotion module; and

communication means for receiving a value of an emotion module of another robot device;

wherein the action generation control means generates a predetermined action on the basis of the value of the emotion module of said another robot device received by the communication means.

101. (new) An action control method for a robot device for controlling an action of a robot device having a multi-joint driving unit, the method comprising:

an external state detection step of detecting an external state;

a value change step of changing a value of an emotion module on the basis of the detected external state;

an action generation control step of controlling the multi-joint driving unit on the basis of the changed value of the emotion module; and a reception step of receiving a value of an emotion module of another robot device by communication means;

wherein the value of the emotion module of the robot device changes on the basis of the value of the emotion module of said another robot device received by the communication means.

102. (new) An action control method for a robot device for controlling an action of a robot device having a multi-joint driving unit, the method comprising:

an external state detection step of detecting an external state;

a value change step of changing a value of an emotion module on the basis of the detected external state;

an action generation control step of controlling the multi-joint driving unit on the basis of the changed value of the emotion module; and

a reception step of receiving a value of an emotion module of another robot device;

wherein at the action generation control step, a predetermined action is generated on the basis of the value of the emotion module of said another robot device received by the communication means.

103. (new) A recording medium in which a program for controlling an action of a robot device having a multi-joint driving unit is recorded, the program comprising:

an external state detection step of detecting an external state of the robot device;

a value change step of changing a value of an emotion module of the robot device on the basis of the detected external state;

an action generation control step of controlling the multi-joint driving unit on the basis of the changed value of the emotion module; and

a reception step of receiving a value of an emotion module of another robot device by communication means;

wherein the program controls the value of the emotion module of the robot device so that the value changes on the basis of the value of the emotion module of said another robot device received by the communication means.

104. (new) A recording medium in which a program for controlling an action of a robot device having a multi-joint driving unit is recorded, the program comprising:

an external state detection step of detecting an external state of the robot device;

a value change step of changing a value of an emotion module of the robot device on the basis of the detected external state;

an action generation control step of controlling the

multi-joint driving unit on the basis of the changed value of the emotion module; and

a reception step of receiving a value of an emotion module of another robot device;

wherein the program controls so that at the action; generation control step, a predetermined action is generated on the basis of the value of the emotion module of said another robot device received by the communication means.